



OKLAHOMA STATE UNIVERSITY

David J. Schmidly
System CEO, President
107 Whitehurst
Stillwater, Oklahoma 74078-1015
405 744 6384
Fax 405 744 6285
Email: osupres@okstate.edu

September 13, 2006

The Honorable Tom Coburn, Chairman
Subcommittee on Federal Financial Management,
Government Information and International Security
Committee on Homeland Security and Government Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

This is in response to your letter of July 27, 2006, in which you requested that I provide you with a list of federal "appropriations" or "earmarks" Oklahoma State University has received since 2000 for certain projects, entities, programs or services and other related information.

As I have been President of Oklahoma State University since January of 2003, I will confine my response only to those years when our research efforts were under my direction and that of my administration. Immediately after becoming President, I initiated a strategic planning process, which included a complete overhaul of the scope and direction of our university built around our land-grant mission of teaching, research, and extension. Our plan, called "Achieving Greatness," included an emphasis on strengthening the research capacity of the university. Our new plan called for new directives with respect to the objectives of Oklahoma State's annual requests for earmarked federal funding of research initiatives. The principle new directive to OSU researchers, which came out of this process, was to require that all research projects and initiatives, particularly those depending upon federal funding, have a specific and well-defined economic development purpose aimed at developing the local, state, regional, and national economies, or national or homeland security implications.

The information you have requested is contained in the attached report we have prepared for you. It is important that you understand how these projects were selected as they were subjected to an intense internal review process starting with the faculty, including the department heads and deans, the vice president for research and technology transfer, the president of our center for innovation and economic development, and finally by me as president of the university. The screening criteria included the importance of the project to Oklahoma and our stakeholders (e.g., agriculture commodity groups and farmers), whether or not the project addressed a state, national or international need, the potential impact of the project on the local and state economy, and finally our capability to conduct the work (i.e., the quality of faculty involved with the project). Projects proposed by faculty that did not meet these criteria

were not included in our federal initiative program. Each of the projects is assembled every year into a notebook that we call the "Orange Book," and I believe your office has received a copy of this since you have been in office.

With respect to earmarked federal funding received by Oklahoma State University, it is the position of my administration that this funding has been of the utmost importance to our growth and development as a research university literally from the inception of the institution as a land-grant university through to the present, and will continue to be so for the foreseeable future. For many developing research institutions and those in the second and third tiers of research universities, as measured by the amount of federal research dollars received annually, Congressional earmarking of funding for research infrastructure and programming has to a large extent leveled the playing field with the nation's "elite" research universities with respect to the availability of federal funding and, in turn, broadened the national research base.

As a research scientist, university professor, university research administrator, and university president for almost 40 years, I have long believed that developing and second and third tier research institutions, such as Oklahoma State, have been consistently discriminated against in the awarding of competitive federal grants due to the unavoidable built-in bias of the so-called "peer review" system of grant awards administered by federal agencies. This bias is a result of federal peer review panels long being dominated by those research universities which already receive a disproportionate share of competitive federal research grants to each other.

For example, according to a recent article in *The Scientist* (*The Inequality of Science*, August 2006), in 2004 close to one in five extramural NIH dollars went to only 10 of the 3,000 institutions that received grants. Five US states get almost half of all funding — and Oklahoma is not one of those states. In 2004, OSU received \$4.5 million from NIH, amounting to less than one percent of that given to the top-funded school that year, Johns Hopkins University. There is even evidence that the gap between the "haves" and "have-nots" may be widening even further. Between 1994 and 2004, in the rankings of universities and colleges according to total R&D expenditures in biological sciences, the difference between the number one school and the 100th school more than doubled. Senator, I ask you, in this knowledge-driven competitive world, how is my university to fairly compete in such an environment? In the words of one of the scientists interviewed in this article, "They've got tanks for weaponry, and we've got BB guns."

These data support the conclusion that the federal peer review process has created a CATCH 22 for universities like Oklahoma State. If we cannot win competitive research grants, we cannot upgrade our research infrastructure. If we do not have modern research equipment and instrumentation, we cannot recruit our share of highly qualified research faculty. If we cannot recruit highly qualified faculty, we cannot win more competitive grants. This is a vicious cycle for the developing institutions like Oklahoma State that is perpetuated by the domination of the federal research grant system by already successful research universities. Certainly, the elite universities are

not the sole repositories of intellect and research capabilities in this nation, nor should they be. Oklahoma State University and other institutions like ours across the nation can make an even greater contribution to the national research agenda and deserve the right to compete fairly for federal research dollars. It was precisely to address this problem that Congress created, through an appropriations earmark, the EPSCoR program which sets aside certain percentages of National Science Foundation and other federal agency research dollars for research institutions in states like Oklahoma which are discriminated against by the existing peer review process. However, while well intended and successful, EPSCoR has been unable to level the federal research funding playing field to the extent necessary to help broaden the national research base.

However, absent any changes in the federal peer review system, developing and second and third tier research universities, including Oklahoma State, have over recent years reached out to their Congressional Delegations seeking alternative research funding. Congress addressed this situation and the need to broaden the nation's scientific research base by earmarking federal research dollars directly for meritorious projects and programs at developing and second and third tier research universities across the country. This earmarked funding has broken the CATCH 22 and has accelerated research innovation and capability at institutions like Oklahoma State, which otherwise would be hamstrung in the effort to win competitive grants.

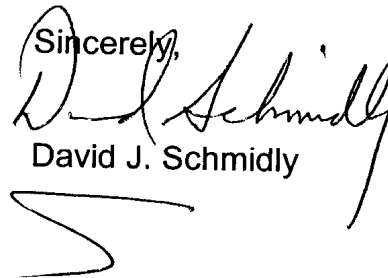
Recent Congressional earmarks have enabled OSU researchers to concentrate on technological progress aimed at economic development for the state of Oklahoma and homeland and national security. OSU research programs supported by direct appropriations are, for example, responsible for many agricultural breakthroughs, which have been helpful to farmers and ranchers from Oklahoma and other states, for the development of prototype body armor now being tested by U.S. Marines in combat in Iraq, for the expansion of OSU's Health Science Center's rural telemedicine programs across the state, and for the initial development of a national sensor testing center in Ponca City, among many others. Earmarked federal transportation funding was also responsible for the development of an intermodal transportation system that connects all of the OSU campuses across the state for the benefit of students and faculty.

In each case above, our University had no reasonable chance of trying to win any available federal funding through other means. Our Congressional representatives believed that these projects were important enough to Oklahoma and the nation to receive specially earmarked federal funding and we are happy to report that the results of each project have been impressive and are contributing greatly to the research missions of the federal agencies, to economic development in Oklahoma and to national or homeland security objectives.

And, I am proud to say, some of our projects have had a huge impact in addressing important national issues such as the war on terror. For example, in the last appropriation cycle, we received an earmark to develop a product known as "Quad Guard" -- a body armor for U. S. combatants. We had no time to pursue a conventional

grant process because our researchers had found a way to protect the limbs of our soldiers in Iraq and it was needed immediately. With the funding we received, we developed and tested a prototype in a few months and within 3 months 3,000 to 4,000 units were deployed for use in Iraq. This product, which now has a government procurement number, is manufactured in Pauls Valley, Oklahoma, thus creating jobs and economic development in our state. Just a few days ago we were informed that our project has been selected to receive the outstanding research project award from the Department of Homeland Security.

In conclusion, we at Oklahoma State University believe that earmarked federal research funding is critical to the future growth of our institution as a research university. Our researchers strive to meet our university's stated research objectives and those of the federal agencies with which we work. We are hopeful that Congress will continue to act through the earmarking process to level the playing field with respect to the availability of federal research dollars for developing and second and third tier research institutions. Such continued action will broaden the research capabilities of our nation's research universities and contribute greatly to the nation's research agenda.

Sincerely,

David J. Schmidly

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Attachment

c: Senator James Inhofe
Congressman Frank Lucas